

REMARKS/ARGUMENTS

Reconsideration and allowance of the above-identified application are respectfully requested. Claim 1 is amended herein. Claims 1 and 4-15 remain pending.

At the outset, Applicants note that the Examiner states that the term “integrated” was not given patentable weight. However, Applicants amended claim 1 in the prior amendment to replace the term “integrated” with the term “coupled to one another” (referring to the welding device and the part feeding device). Accordingly, Applicants respectfully request reconsideration of the claim terms as pending presently.

In the office action, the Examiner rejected claims 1, 4 and 6-7 under 35 U.S.C. §103(a) as being unpatentable over the combination of U.S. PG Pub. No. 2003/0189033 (hereinafter ‘Aoyama ‘033’) in view of U.S. PG Pub. No. 2003/0127432 (hereinafter ‘Aoyama ‘432’). Applicants traverse the rejection since the combination of Aoyama ‘033 and Aoyama ‘432 clearly fails to teach or suggest each and every element of at least claim 1.

In particular, claim 1 recites that the welding system, which includes *both a welding device and a part feeding device*, rotate about an axis that is approximately coaxial with a moving axis line of the movable electrode (of the welding device). The Examiner erroneously cites shaft 26 as a “fixed shaft” and support member 27 as rotating with movable electrode 34 about an axis that is coaxial with the fixed shaft

26. Aoyama '033 describes an arc welding device wherein head 34 rotates about shaft 26 in order to arc weld *around* flange 3 of a part 2.

However, Aoyama '033 is not concerned with, and does not describe, a device in which the welding device and the part feeding device rotate *together* as a welding system, about an axis that is coaxial with an axis of the movable electrode of the welding device, as recited in claim 1. As discussed in the present application, the *relative* position of the welding device and the part feeding device must be set very precisely, and yet it is advantageous to enable the entire welding *system* (welding device *and* part feeding device) to rotate together so that the entire system can be adjusted in a factory location. The part feeding device and the welding device of Aoyama '033 rotate together, if at all, about joint drive unit 54, and *not* about an axis that is substantially coaxial with the axis of the movable electrode.

It should also be noted that Aoyama '033 is directed to an arc welding device, which arc welds around the outer periphery of the flange of a bolt, rather than a resistance welding device described in the present application. Thus, Aoyama has no movable electrode, as claimed herein. In addition, the only rotation described in Aoyama '033 has to do with rotating the moving head 34 (and thus the arc welding wire) around the outer periphery of the flange of a bolt, rather than rotating the entire integrated combination of welding device and part feeding device (the welding *system*), as in embodiments of the present invention.

Aoyama '432 is cited as teaching resistance welding, but Aoyama '432 fails to make up for the deficiencies discussed above. Accordingly, since neither Aoyama '033 nor Aoyama '432, taken together or separately, teach a welding *system* including

a welding device and a part feeding device that rotate about an axis that is coaxial with a movable electrode of the welding device, the rejection must be withdrawn. Claims 4 and 6-7 depend from claim 1 and are therefore also allowable for at least the same reasons. Reconsideration in view of the above arguments is respectfully requested.

Furthermore, Applicants have amended claim 1 to clarify that the movable electrode is a *reciprocating-type* electrode. That is, the movable electrode in embodiments of the present invention moves back and forth, rather than rotating as the movable head in Aoyama '033 which carries the electrode wire 36 in order to weld around the flange of a bolt. This is not new matter, and is described, for example, on page 12, lines 7-11 of the specification.

Applicants have also amended claim 1 to clarify that the coupling member is an *elongated* coupling member, and that the elongated coupling member is fixed to the member main body, and the part feeding device is fixed to the elongated coupling member. As a result of this arrangement, the welding device and part feeding device may be arranged such that the extended position of the part feeding device is arranged in precise relation to the welding device, and yet the entire combination of welding device and part feeding device may be rotated *together* about the axis line of the movable electrode and the fixed shaft member, while *maintaining* the precise alignment between the welding device and the part feeding device. This is not new matter, and is described, for example, on page 13 of the specification at lines 12-22.

The member main body is thus a core component of embodiments of the present invention, with the elongated coupling member serving to precisely set the

relative position of the welding device and the part feeding device, while the attachment of the welding *system* (welding device together with part feeding device) to the stationary member is simplified. This is in contrast to the board 7 of Aoyama '033 (cited by the Examiner), which is not connected to any member main body. Rather, board 7 of Aoyama '033 is attached to joint drive unit 54, and the welding device is attached to one end of board 7 via a shaft, while the part feeding device is attached to the other end of board 7. In particular, the arrangement of Aoyama '033, by omitting the specific arrangement of member main body, elongated coupling member and part feeding device, as claimed in claim 1, does not permit the simplified connection of the integrated welding device and part feeding device to a stationary member, the precise arrangement of the extended positions of the part feeding device and the movable electrode of the welding device, and at the same time permit simplified rotation of the combined welding device and part feeding device (the welding *system*). Accordingly, the Examiner's rejection must be withdrawn, and reconsideration is respectfully requested.

The Examiner rejected claim 5 as being obvious under 35 U.S.C. §103(a) over Aoyama '033 and Aoyama '432 in view of U.S. Patent No. 4,943,098 to Aoyama (hereinafter 'Aoyama '098'). Aoyama '098 is cited as teaching a plurality of part feeding devices each of which feeds a different type of part. However, even assuming, arguendo, that Aoyama '098 describes this feature, Aoyama '098 fails to make up for the deficiencies discussed above with regard to claim 1. Since claim 5 depends from claim 1, and since none of the Aoyama references teach or suggest a welding system

that rotates about a common axis with a movable electrode of a welding device, the rejection must be withdrawn.

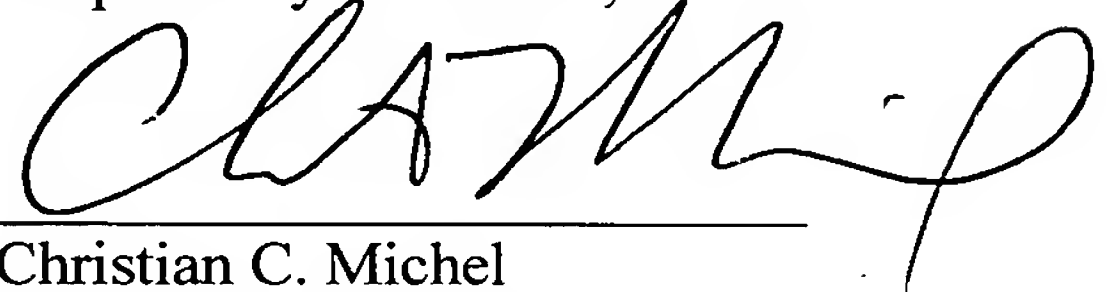
The Examiner has rejected claims 8-15 under 35 U.S.C. §103(a) as being obvious over Aoyama '033 in view of previously cited Quinci. At the outset, Applicants note that claims 8-11 depend from claim 1. Since Quinci fails to make up for the deficiencies discussed above, claims 8-11 should be allowed for at least the same reasons.

Claims 8 and 12 both recite “a clamp block” and “an auxiliary clamp block” for setting a moving distance of a support rod. The Examiner cites Quinci as teaching this feature. Applicants traverse the rejection. In particular, the Examiner cites gripper camp arm 24 (see FIG. 8) as the “clamp block” and gripper block 26 as the “auxiliary clamp block. However, gripper block 26 is clearly *not* a clamp block, as it is designed such that the central opening is purposefully larger than the diameter of shaft 12 so that it is rotatable about shaft 12. Accordingly, gripper block 26 is unable to “clamp” on to shaft 12 by design. Furthermore, gripper block 26 is incapable of adjusting a moving distance of a support rod, since gripper block 26 works in connection with spring clip 86 and groove 88 of the shaft 12 to *fix* the location of gripper block 26 on the shaft 12. By contrast, the auxiliary clamp block of embodiments of the present invention advantageously may be clamped onto or released from the support rod in order to determine the location of the auxiliary clamp block 26 on the support rod. As described in the specification, auxiliary clamp block is loosened, moved an appropriate distance on the support rod, clamped onto the rod, and then the main clamp block is loosened so that the main clamp block moves the desired distance until

it comes into contact with the tightened auxiliary clamp block. The gripper block of Quinci, in combination with the gripper clamp arm 24, is incapable of performing this function since (a) the gripper block of Quinci cannot clamp onto the shaft, and (b) the gripper block of Quinci is fixed to a particular location on the shaft as determined by the groove 88 and the spring clip 86. Accordingly, since Quinci fails to teach or suggest both a clamp block *and* an auxiliary clamp block for setting a moving distance of a support rod, as claimed in claims 8 and 12, the rejection must be withdrawn. Claims 9-11 and 13-15 depend from claims 8 and 12, respectively, and are therefore allowable for at least the same reasons.

In view of the above, it is believed that the application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the telephone number indicated below.

Respectfully Submitted,



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